

NOTES ON THE NOMENCLATURE OF PUPILLIDÆ.

BY H. A. PILSBRY.

The receipt of an article from Professor Cockerell upon this subject, published in this number, causes me to insert here some notes which had been prepared for a forthcoming paper upon the snails of Arizona and New Mexico. The status of the name *Pupa* was discussed by Mr. B. B. Woodward (Journ. of Conch., Oct., 1903, 358), who did good work towards clearing the ground. Dall in this journal for February, '04, also went over the nomenclature correcting some errors, but complicating the question by a few new ones. His statement that "Risso's first species [of *Jaminia*] is *Vertigo minutissima* Hartmann, which should properly have been placed in *Suraphia*," is not borne out by an examination of Risso's work, wherein the species stand thus:

Risso's species.	Equivalents in ordinary use.	Modern genus.
<i>Jaminia muscorum</i>	<i>Pupa muscorum</i> L.	<i>Pupilla</i> .
<i>J. marginata</i>	<i>Pupa umbilicata</i> Drap.	<i>Jaminia</i> .
<i>J. edentula</i>	<i>Bulimus obscurus</i> Müll.	<i>Ena</i> .
<i>J. secale</i>	<i>Pupa secale</i> Drap.	<i>Abida</i> .
<i>J. tridens</i>	<i>Bulimus tridens</i> Brug.	<i>Eucore</i> .
<i>J. granum</i>	<i>Pupa granum</i> Drap.	<i>Abida</i> .
<i>J. sulculata</i>	Undetermined	<i>Abida</i> .
<i>J. trilamellata</i>	Undetermined	<i>Abida</i> .
<i>J. heterostrophu</i>	<i>Bul. quadridens</i> Müll.	<i>Eucore</i> .
<i>J. quinquelamellata</i>	<i>Pupa cinerea</i>	<i>Abida</i> .
<i>J. septemdentata</i>	<i>Pupa avenacea</i> Brug.	<i>Abida</i> .
<i>J. heptodonta</i>	Undetermined	<i>Abida</i> ?
<i>J. multidentata</i>	<i>Pupa polyodon</i> Drap.	<i>Abida</i> .
<i>J. niso</i>	<i>Bulimus niso</i> Pfr.	<i>Eucore</i> .

All of Risso's species of *Jaminia* that are recognizable belong to the subsequent groups *Ena* 1831, *Pupilla* 1831, *Abida* 1831, *Eucore* 1837, and *Louria* 1840.

Now *P. muscorum* under the name *marginata* was second of the two species for which the name *Pupilla* was proposed in 1831 in Turton's *Manual*, the other being *P. umbilicata*. The latter was removed in 1840 to *Lauria*, leaving *P. muscorum* the type of *Pupilla*. There is

nothing especially new about this conclusion, since it was reached by Gray in 1847 (P. Z. S., p. 176), and has been held by Pfeiffer, by Von Martens (Die Hel. 1860, p. 290), and nearly every one else. There have been differences of opinion about the limits of the group *Pupilla*, but never about its type. Among American writers, Morse and Tryon have used *Pupilla* as a generic name.

Abida was next removed from *Jamina*. This is the group commonly known as *Torquilla*. Then in 1837 *Eucore* was proposed for the species *tridens* and *quadridens* (*heterostropha* Risso). These successive eliminations leave only the group *Lauria* Gray, represented by *J. marginata* Risso (= *Pupa umbilicata* Drap.) to bear the name *Jamina*.*

From the foregoing it follows that the name *Pupilla* will replace *Pupa*, as Prof. Cockerell has held. The groups represented in *Jamina* Risso, will stand thus :

PUPILLA Lech. in Turton, for *Pupa* of authors.

JAMINIA Risso, restricted, for *Lauria* Gray.

ENA Leach in Turton, for *Buliminus* Auct.

ABIDA Leach in Turton, for *Torquilla* Auct.

EUCORE Ag. in Charp., for *Chondrula* Auct.

. All of these groups I regard as of generic rank.

As to *Saraphia* Risso, the only species of the group that has been positively identified is *S. tridentata*, which is the *Carychium tridentatum* of recent authors.

After a bout with Risso, one is likely to accept as a just one Bourguignat's estimate of his abilities: "Écrivain fécond, mais sans jugement, innovateur infatigable, mais absurde, Risso a embrassé dans ses écrits presque toutes les branches de l'histoire naturelle, sans en avoir bien traité une seule."

The group *Alæa* Jeffreys, 1830, has been discussed by Professors Dall and Cockerell, who agree that its type must be *Pupa minutissima* Hartm. It does not do to fix types for these old groups without reference to what has been done by our predecessors. Gray and Herrmannsen took a hand in this game over fifty years ago, and they expressly selected *Alæa palustris* = *Vertigo antivertigo* as the

* The progress of events had already restricted *Jamina* before Gray chose *J. heterostropha* for its type (P. Z. S., 1847, p. 176). His selection came too late and is ineffective.

type of *Alæa*. I do not see how their action can be successfully opposed. The name *Alæa* has quite generally been used for dextral forms of *Vertigo*, and is so retained in Westerlund's last *Catalog*. No valid grounds exist for shifting the name; and the advisability of substituting *Alæa* for *Sphyradium*, as Prof. Cockerell suggests, need not be considered. His suggestion that *P. minutissima* may be a *Sphyradium* is interesting, and deserves investigation.

Ptychochilus Boettger, is preoccupied by Agassiz in *Pisces*; a fact I neglected to mention at the time I proposed *Nesopupa*. The names stand thus:

Ptychocheilus Agassiz, Amer. Journ. Sci. and Arts, XIX, 1855, p. 227.

Ptychochilus Jordan, Bull. U. S. Nat. Mus. no. 10, p. 58 (1877).

Ptychochilus Boettger, Conch. Mittheil., 1881.

Bifidaria and *Eubifidaria* of Sterki call for some notice in view of the note by Dall in NAUTILUS, Feb., 1904, p. 116. The original species referred by Sterki to *Bifiduria* were *Pupa contracta* Say and *P. servilis* Gld. from certain Mexican localities. For *P. contracta* Sterki subsequently (1892) proposed the section *Albinula*, leaving *servilis* the type of *Bifidaria*.

In January, 1893, Dr. Sterki proposed *Eubifidaria* with the type "*hordeacea* Gabb," by which he meant the form which I call *Bifidaria procera cristata*. This is demonstrated by his previous article treating of "*hordeacea*," by his list of the preceding year, and by the words of his diagnosis of *Eubifidaria*, "lamellæ typical."

The type of *Eubifidaria* is therefore *P. hordeacea* Sterki not Gabb = *B. procera cristata* P. & V., and the group becomes an absolute synonym of *Bifidaria*, s. str. The true *hordeacea* Gabb, which Dr. Sterki demonstrably did not intend, belongs to a different genus, *Pupoides*.

In conclusion I might say that the generic and subgeneric nomenclature of the United States forms, given in my catalogue of 1900,* stands as there set forth with the single exception of the genus *Pupa*, which now becomes *Pupilla*.

The family name having precedence for the group is *Pupillidæ* Turton, 1831.

* Proc. Acad. Nat. Sci. Phila., 1900, pp. 605-610.